

CLAIMS

What is claimed is:

1. A vehicle bearing apparatus comprising:
 - a wheel hub having an integrally formed wheel mounting flange at one end and an axially extending cylindrical portion of a smaller diameter;
 - a wheel bearing including a double row rolling bearing being arranged on the cylindrical portion;
 - a knuckle of a light metal, said wheel bearing is press-fit into the knuckle via a predetermined interference, and said wheel hub being rotatably supported relative to the knuckle via the wheel bearing; and
 - at least one of an inner circumferential surface of an inner ring and an outer circumferential surface of an outer ring of the wheel bearing is formed with at least one annular groove and said at least one annular groove is filled with a resin band of heat resisting synthetic resin.
2. The bearing apparatus of claim 1 wherein said at least one resin band is made of synthetic resin from the polyamide family having a coefficient of linear thermal expansion of $(8\sim 16)\times 10^{-5}/^{\circ}\text{C}$.
3. The bearing apparatus of claim 1 wherein said at least one resin band is formed so that it projects from a circumferential surface of the inner and/or outer rings by $0\sim 50\mu\text{m}$.

4. The bearing apparatus of claim 1 wherein said at least one annular groove is formed in a load supporting region of the inner or outer ring.

5. The bearing apparatus of claim 1 wherein said at least one annular groove is formed as an eccentric groove, offset a predetermined amount from the central axis of the wheel bearing.

6. The bearing apparatus of claim 1 wherein the wheel bearing is secured with said wheel hub and sandwiched between the wheel hub and a shoulder of an outer joint member, forming a part of a constant velocity universal joint, via a disc shaped expansion compensating members made of heat resisting synthetic resin, and a predetermined preload is applied to the wheel bearing.

7. The bearing apparatus of claim 6 wherein an annular groove is formed on each end face of larger diameter of the inner ring and the annular groove is filled with the expansion compensating member.